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(71) Applicant(s)

Scot Young Research Limited  
(Incorporated in the United Kingdom)  
Hill Road, Lye, STOURBRIDGE, West Midlands,  
DY9 8HG, United Kingdom

(72) Inventor(s)

Scot Young

(74) Agent and/or Address for Service

A R Davies & Co  
27 Imperial Square, CHELTENHAM, Gloucestershire,  
GL50 1RQ, United Kingdom

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(56) Documents Cited

GB 2315407 A GB 2298128 A US 4675932 A  
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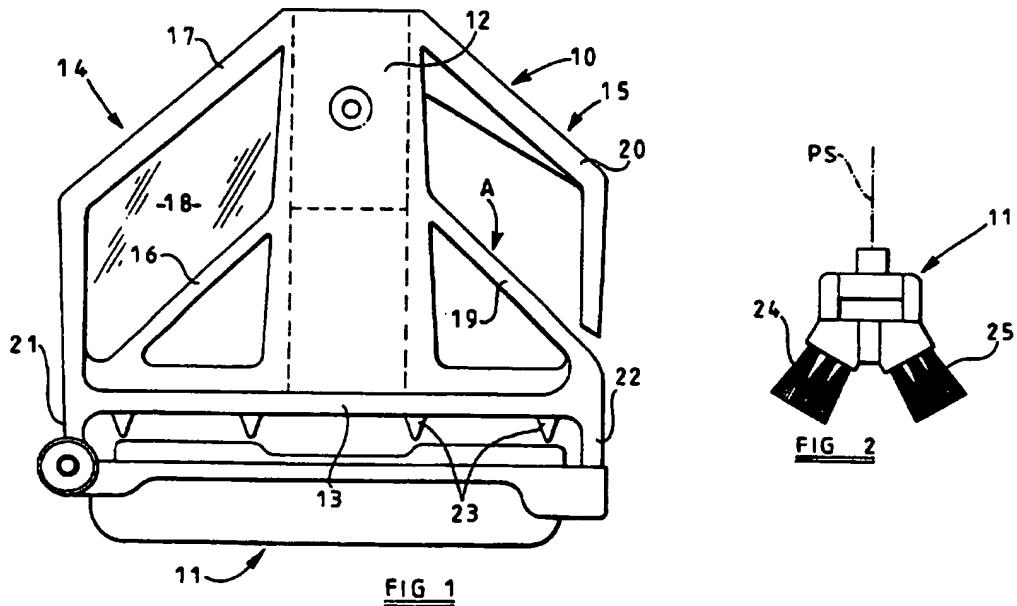
(58) Field of Search

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(54) Abstract Title

Mophead

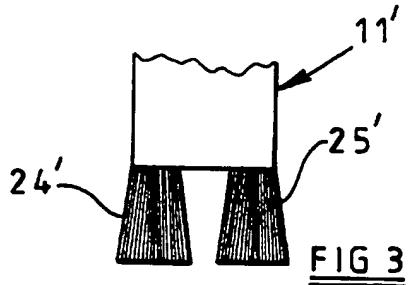
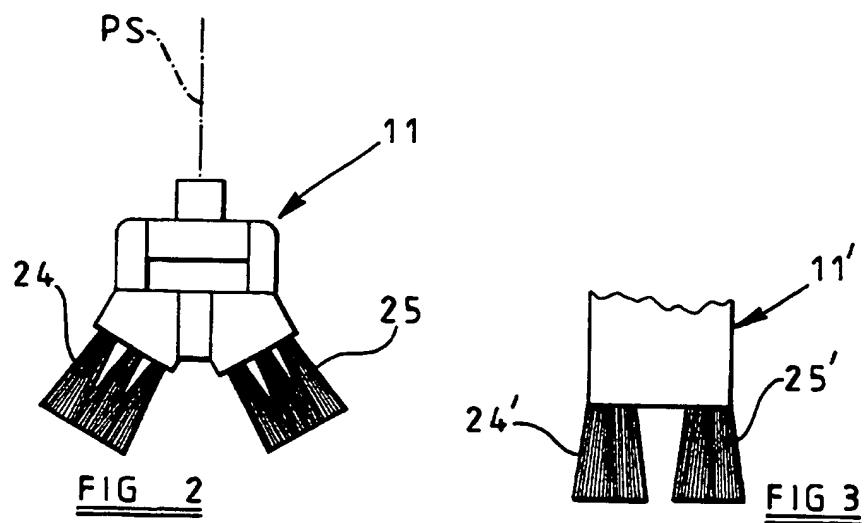
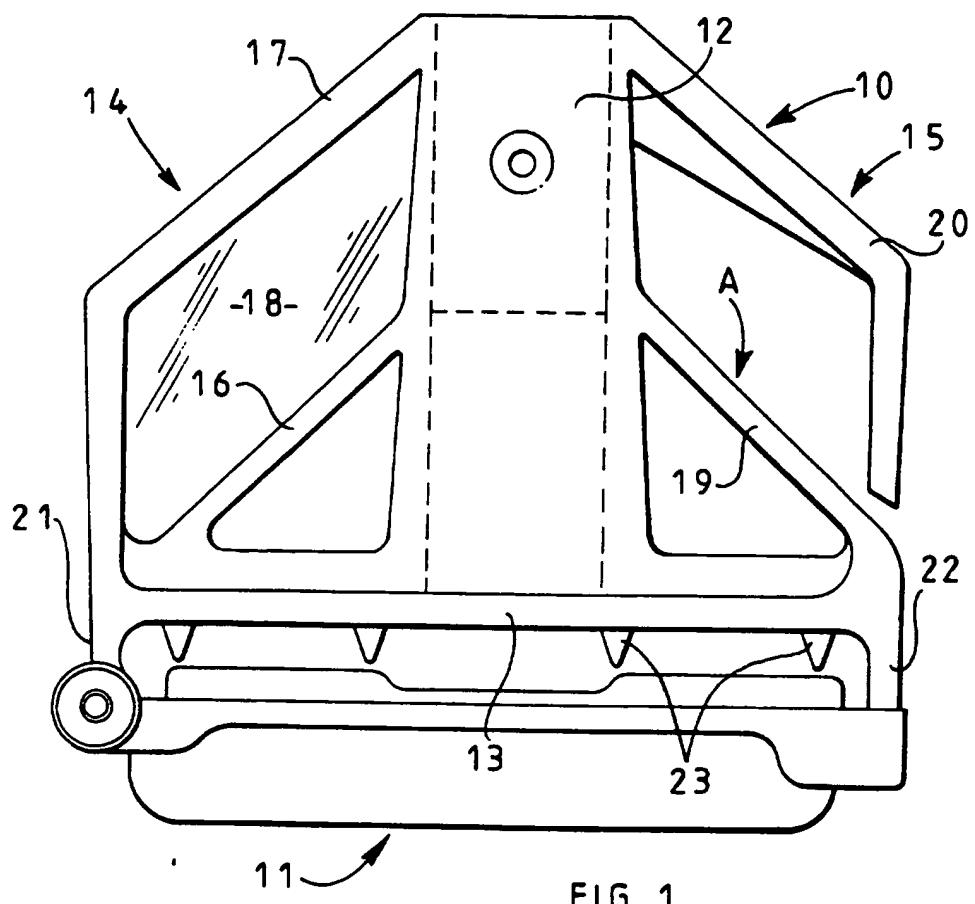
(57) A mophead comprises a holder and a bundle of flexible strands (30, Fig. 6) which are gathered together at the centre where they are held by the holder. The holder comprises a body part 10 for attachment to a mop handle and a releasable clamping member 11 for releasably clamping the bundle of strands to the body part of the holder. The holder also supports an abrasive pad or a brush 25 on the underside of the strand bundle. Prongs 23 help to firmly clamp the strand bundle.



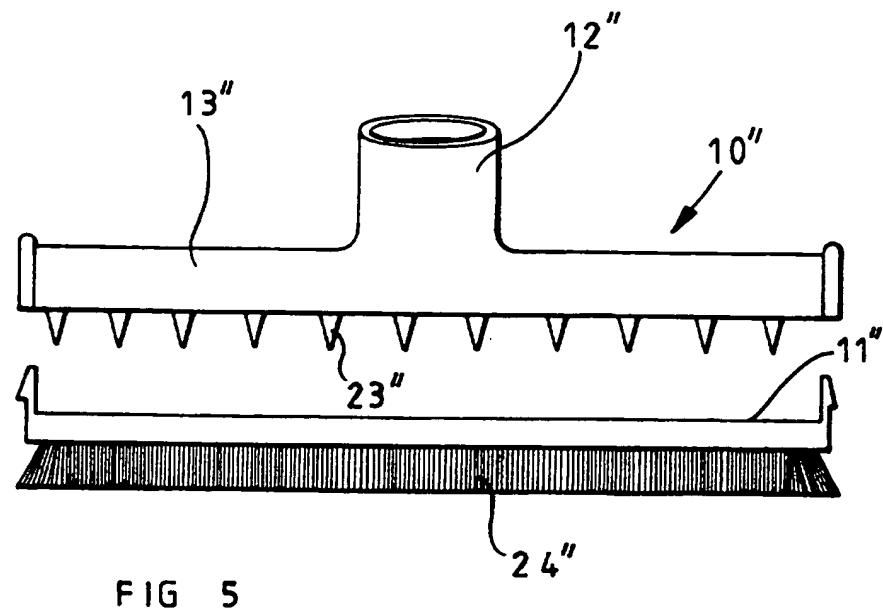
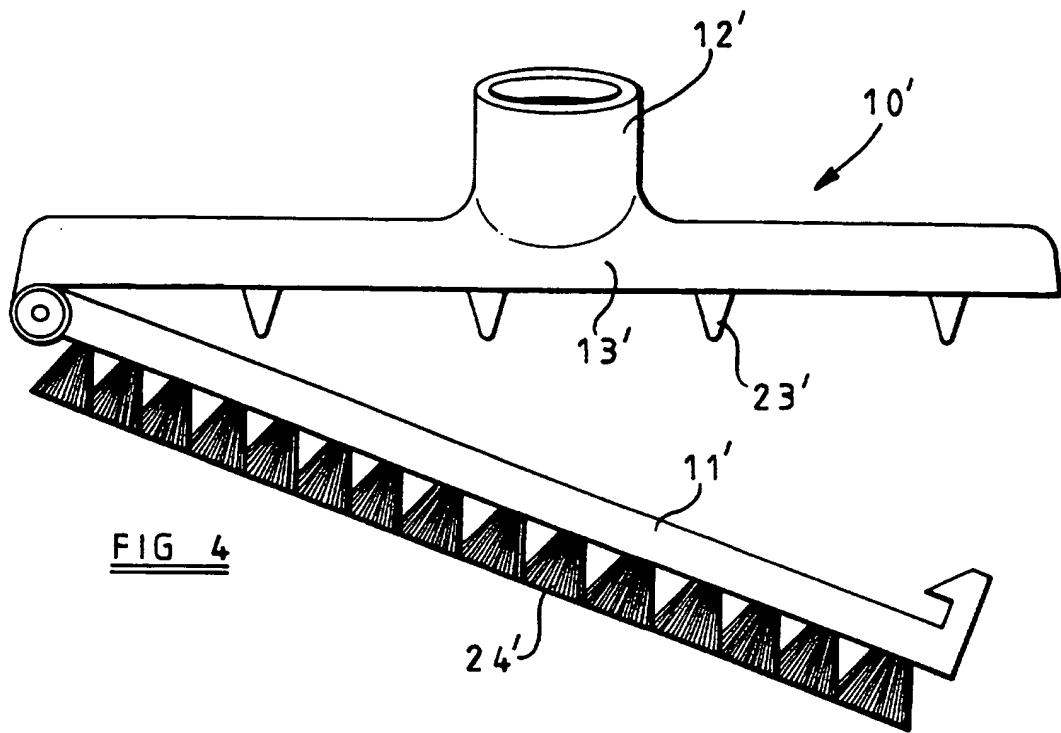
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At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date within the period prescribed by Rule 25(1) of the Patents Rules 1995



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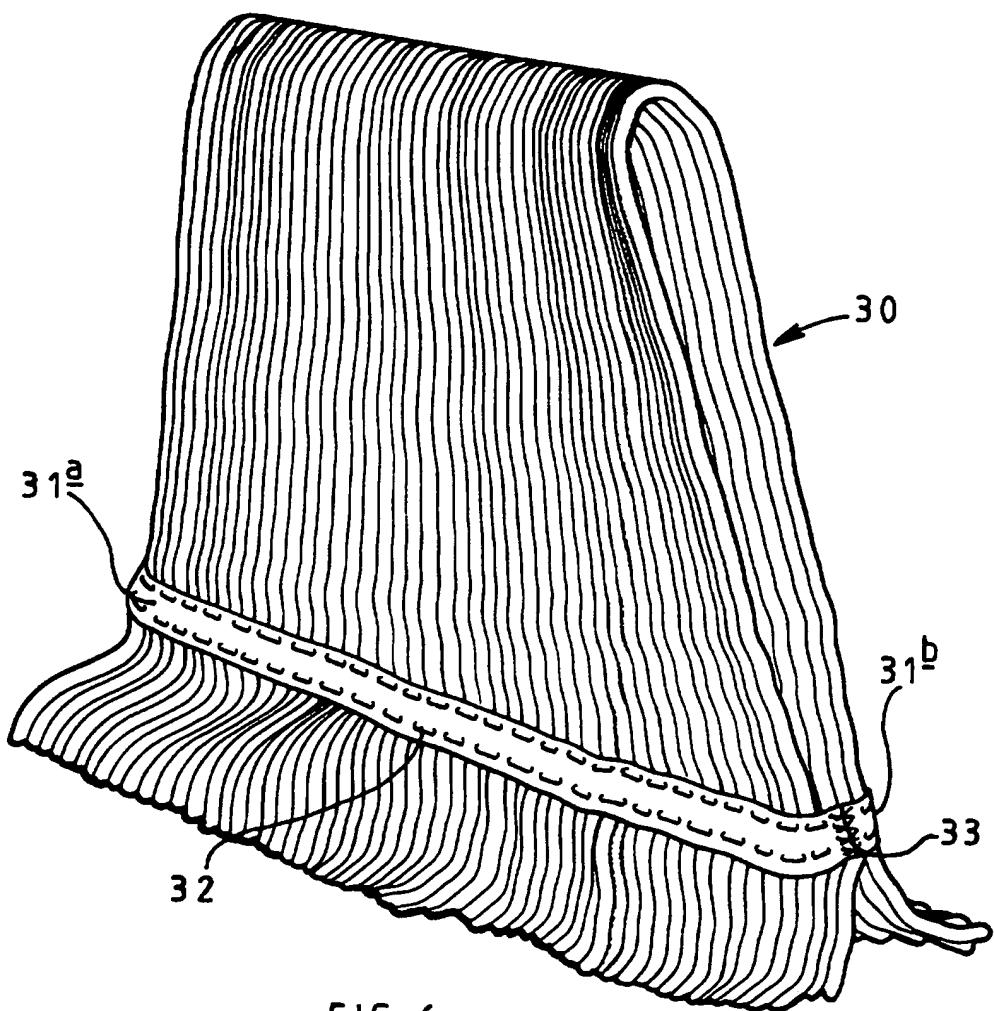


FIG 6

MOPHEADS

This invention relates to mopheads for mops which are used, primarily, for wet mopping of floors.

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Mops comprise a mophead and a handle. The mophead is generally formed from a bundle of flexible strands (sometimes referred to as "threads") which are gathered together at the centre (to define two fan shaped parts) where they are secured to a holder, such as by a non-releasable staple. The holder is attached to the handle.

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According to the present invention there is provided a mophead comprising a holder and a bundle of flexible strands which are gathered together at the centre where they are held by the holder, the holder comprising a body part for attachment to a mop handle and a releasable clamping member for releasably clamping the bundle of strands to the body part of the holder, the holder also supporting a scrub pad or a brush on the underside of the strand bundle.

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Preferably, the clamping member is elongate and is hingedly connected at one end to the body part and is releasably connected at its other end with the body part.

Alternatively, the clamping member is elongate and is releasably connected with the body part at its two ends.

Preferably, the body part of the holder has a plurality of prongs which project into the bundle of strands when the bundle is clamped by the holder.

Preferably, the holder supports a brush on the underside of the mophead.

5 In this case, the brush bristles are, preferably, directly secured to the clamping member and, in this case, there are, preferably, two groups of brush bristles one on either side of a plane of symmetry of the mophead, each group, preferably, extending at an acute angle to the said plane of symmetry.

10 Alternatively, the holder supports a scrub pad on the underside of the mophead. In this case, the abrasive pad is, preferably, clamped between the clamping member and body part of the holder on the underside of the bundle of flexible strands.

15 Preferably, the strands of the bundle are connected together at positions spaced from but adjacent to each of their two ends, each edge portion of each mop half being connected to an adjacent edge portion of the other mop half and the length of the strands and the width of the strands where gathered together at the centre being such that a user may selectively use the entire undersurface of the mophead or the upper surfaces of the two mop halves for mopping.

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More particularly, the mophead preferably comprises a generally rectangular bundle of flexible strands presenting opposed first and second ends, opposed side edges, and a centre intermediate the ends, the strands of the bundle being held together at the centre to divide the bundle into a pair of mop halves, a first band for

holding the strands of the bundle together near the first end of the bundle, a second band for holding the strands of the bundle together near the second end of the bundle, the first and second bands each presenting opposed ends disposed at the side edges of the bundle, the ends of the first band being connected to the ends of the second band  
5 to permit the two halves of the mophead to be parted by applying a twirling action to the holder.

Preferably, the centre portion has a width of at least 7.5 cm and, more preferably, a width of at least 10 cm and, yet more preferably, a width of at least 12  
10 cm.

Preferably, each of said mop halves has a length of at least 25 cm and, more preferably, a length of at least 30 cm.

15 The invention will now be more particularly described, by way of example, with reference to the accompanying drawings, in which:-

Figure 1 is a side view of one embodiment of a holder of a mophead according to the invention,

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Figure 2 is an end view of the clamping member of Figure 1 with brush bristles attached thereto in one orientation,

Figure 3 is an end view of a modified clamping member having brush

bristles attached thereto in a second orientation,

Figure 4 is a side view of another embodiment of a holder of a mophead according to the invention,

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Figure 5 is a side view of yet another embodiment of a holder of a mophead according to the invention, and

Figure 6 is a perspective view of a bundle of strands for attachment to the  
10 holders of Figures 1 - 5.

Referring firstly to Figures 1 and 2 of the drawings, the mophead holder shown therein comprises a body part 10 and an elongate releasable clamping member  
11.

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The body part 10 has a tubular central portion 12 which defines a socket for receiving a mop handle (not shown), an elongate base portion 13 which co-operates with the releasable clamping member 11 to clamp a bundle of flexible strands to the holder, and two side wings 14 and 15.

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The side wing 14 is rigidly connected between the tubular central portion 12 and the base portion 13 and comprises inner and outer rib members 16 and 17, respectively, and a web portion 18 therebetween.

The side wing 15 comprises inner and outer rib members 19 and 20, respectively. The inner rib member 19 is connected between the tubular central portion 12 and the base portion 13. The outer rib member 20 is, however, only connected to the tubular central portion 12. The other end of the outer rib member 5 20 is free and there is no web portion interconnecting the inner and outer rib members 19 and 20.

The base portion 13 has two depending legs 21 and 22, one at either end of the base portion, and a plurality of prongs 23 which are equidistantly spaced apart 10 between the legs 21 and 22.

The releasable clamping member 11 is pivotably connected at one end to the leg 21 and the other end of the clamping member 11 and the leg 22 have mutually co-operable snap fit engagement means (not shown) which can be released by applying 15 pressure to the rib member 16 in the direction of the arrow A to flex the leg 22 outwards to thereby release the engagement means.

As shown in Figure 2, brush bristles 24 and 25 are secured directly to opposite sides of the clamping member 11 to extend therefrom at an acute angle to a 20 plane of symmetry PS of the mophead and typically at an angle of between about 30° and 45° to the plane of symmetry.

The holder supports a bundle of strands which are clamped between the base portion 13 and the releasable clamping member 11.

A typical strand bundle 30 is shown in Figure 6 and is made by forming a multiplicity of loops in a single length of elongate flexible material, typically cotton or Syntex. A rectangular blank is then formed by connecting the strands together at positions spaced from, but adjacent to, opposite ends of the strands. The strands are 5 connected adjacent to each of their opposite ends by passing a tape 31a, 31b around the strands and connecting the upper and lower runs of each tape together by stitching 32.

The strands are gathered together at the centre to define two fan shape 10 parts. Each end of the tape 31a is secured to an adjacent end of the tape 31b by stitching 33 so that the two tapes 31a and 31b together form an endless loop securing opposite ends of the strands 10 together.

The width of the strands 30 where gathered together at the centre is at least 15 7.5 cm, more preferably at least 10 cm, yet more preferably at least 12 cm and typically about 14 cm and the length of the strands from end to end is at least 50 cm, more preferably at least 60 cm and typically about 75 cm.

This will allow the mophead to be used as a conventional "stay flat 20 mophead" in which one half of the mophead folds underneath the other half of the mophead as the two mop halves are trailed behind the holder over a floor surface. It will also allow the mophead to be twirled open so that it can be used in similar manner to a conventional "round mophead" in which the entire underside of the mophead is used for mopping. This will also allow the brush to be used to scrub a

floor surface during a mopping operation.

Figure 3 shows a different orientation of the brush bristles. Once again, there are two groups of brush bristles 24' and 25' one on either side of the clamping member 11', but in this case the brush bristles extend in a direction parallel to the plane of symmetry of the holder. In this case, the handle (not shown) of the mop may extend at angle to the plane of symmetry of the mophead rather than in a direction parallel to the plane of symmetry of the mophead.

10 The bristles could be replaced by a scrub pad secured to the clamping member.

Alternatively, the brush bristles or scrub pad could be separate from the clamping member and coupled to the underside of the strand bundle 30 by clamping.

15 Figure 4 shows a simplified holder in which the body part 10' comprises an elongate base portion 13' and an integral socket 12' for receiving a mop handle. Brush bristles 24' are secured to the clamping member 11' which is pivotably connected at one end to the base portion 13' and which is snap fittably engageable at 20 its other end with the base part 13' to clamp a strand bundle between the clamping member 11' and the base portion 13' of the body part 10'.

Figure 5 shows an alternative mop holder in which the body part 10'' comprises a base portion 13'' and an integral socket 12''. Brush bristles 24'' are

secured to the clamping member 11" which is snap fittably engageable at both ends with the base portion 13" of the body part 10".

The embodiments described above are given by way of example only and  
5 various modifications will be apparent to persons skilled in the art without departing  
from the scope of the invention.

CLAIMS

1. A mophead comprising a holder and a bundle of flexible strands which are gathered together at the centre where they are held by the holder, the holder comprising a body part for attachment to a mop handle and a releasable clamping member for releasably clamping the bundle of strands to the body part of the holder, the holder also supporting an abrasive pad or a brush on the underside of the strand bundle.
- 10 2. A mophead as claimed in Claim 1, wherein the clamping member is elongate and is hingedly connected at one end to the body part and is snap fittably engageable at its other end with the body part.
- 15 3. A mophead as claimed in claim 1, wherein the clamping member is elongate and is snap fittably engageable with the body part at its two ends.
- 20 4. A mophead as claimed in any one of the preceding claims, wherein the body part of the holder has a plurality of prongs which project into the bundle of strands when the bundle is clamped by the holder.
5. A mophead as claimed in any one of the preceding claims, wherein the holder supports a brush on the underside of the mophead.
6. A mophead as claimed in claim 5, wherein the brush comprises a plurality

of brush bristles directly secured to the clamping member.

7. A mophead as claimed in claim 6, wherein there are two groups of brush bristles one on either side of a plane of symmetry of the mophead.

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8. A mophead as claimed in claim 7, wherein each group of brush bristles extends at an acute angle to said plane of symmetry.

9. A mophead as claimed in any one of claims 1 - 4, wherein the holder 10 supports an abrasive pad on the underside of the mophead.

10. A mophead as claimed in claim 9, wherein the abrasive pad is clamped between the clamping member and the body part of the holder on the underside of the bundle of flexible strands.

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11. A mophead as claimed in any one of the preceding claims, wherein the strands of the bundle are connected together at positions spaced from but adjacent to each of their two ends, each edge portion of each mop half being connected to an adjacent edge portion of the other mop half and the length of the strands and the 20 width of the strands where gathered together at the centre being such that a user may selectively use the entire undersurface of the mophead or the upper surfaces of the two mop halves for mopping.

12. A mophead as claimed in any one of the preceding claims, comprising a

generally rectangular bundle of flexible strands presenting opposed first and second ends, opposed side edges, and a centre intermediate the ends, the strands of the bundle being held together at the centre to divide the bundle into a pair of mop halves, a first band for holding the strands of the bundle together near the first end 5 of the bundle, a second band for holding the strands of the bundle together near the second end of the bundle, the first and second bands each presenting opposed ends disposed at the side edges of the bundle, the ends of the first band being connected to the ends of the second band to permit the two halves of the mophead to be parted by applying a twirling action to the holder.

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13. A mophead as claimed in claim 12, wherein the centre portion has a width of at least 7.5 cm.

14. A mophead as claimed in claim 13, wherein the centre portion has a width 15 of at least 10 cm.

15. A mophead as claimed in claim 14, wherein the centre portion has a width of at least 12 cm.

20 16. A mophead as claimed in any one of claims 12 - 15, wherein each of said mop halves has a length of at least 25 cm.

17. A mophead as claimed in claim 16, wherein each of said mop halves has length of at least 30 cm.

18. A mophead substantially as hereinbefore described with reference to the accompanying drawings.



The  
**Patent  
Office**

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Application No: GB 9705239.3  
Claims searched: 1 to 18

Examiner: Graham S. Lynch  
Date of search: 19 June 1998

**Patents Act 1977**  
**Search Report under Section 17**

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.P): A4F (FQMX)

Int Cl (Ed.6): A47L 13/20, 13/24

Other: None

**Documents considered to be relevant:**

Category	Identity of document and relevant passage		Relevant to claims
X	GB 2315407	RUBBERMAID. Figures 1, 2. Page 3, line 37 to page 5, line 4.	1, 9
E			
Y	GB 2298128	SCOT YOUNG RESEARCH LIMITED. Whole document.	1, 2, 4, 5, 9, 11 to 17
X	US 4675932	HOFACKER. Figures. Description.	1, 9, 10
Y	US 4553282	LIBMAN BROOM CO. Figures. Column 1, line 44 to column 4, line 13.	1, 2, 4, 5, 9, 11 to 17

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.